

IN THE CLAIMS

A listing of the currently pending claims is given below.

1. (Previously presented) A method of community access control in a Multi-Community Node (MCN), said method comprising:
 - receiving a request for access to an object;
 - consulting a community information base (CIB) responsive to said request, wherein said CIB includes:
 - a user community set (UCS) for each user of said MCN, wherein for a given user and associated UCS, a given community is a member of the UCS if the given user is a member of the given community;
 - an application community set (ACS) for each application on said MCN, wherein for a given application and associated ACS, a given community is a member of the ACS if the given application runs on behalf of a user in the given community; and
 - an object community set (OCS) for each object residing within said MCN, wherein each OCS is included in an ACS of a process which created it;
 - permitting access to said object in response to detecting:
 - said request is from a first user; and
 - a UCS of the first user is a superset of an OCS of said object;
 - denying access to said object in response to detecting:
 - said request is from the first user; and
 - a UCS of the first user is not a superset of an OCS of said object;
 - permitting access to said object in response to detecting:
 - said request is from a process; and
 - an ACS of said process is a superset of an OCS of said object; and
 - denying access to said object in response to detecting:
 - said request is from said process; and
 - an ACS of said process is not a superset of an OCS of said object;

wherein a given OCS comprises a first set of communities, a given UCS is a superset of the given OCS if at least all of the first set of communities are also included in the given UCS, and a given ACS is a superset of the given OCS if at least all of the first set of communities are also included in the given ACS.

2. (Original) The method of claim 1, wherein said object is an operating system controlled resource.
3. (Original) The method of claim 2, wherein said object is selected from the group consisting of a file system, a storage volume, a directory, a file, a record, a memory region, a queue, a pipe, a socket, a port, or an input/output device.
4. (Previously presented) The method of claim 1, wherein an initial owner of said object is a creator of said object.
5. (Original) The method of claim 1, further comprising permitting an owner of said object to designate a first user as a new owner of said object, in response to detecting a UCS of said first user is a superset of said OCS.
6. (Original) The method of claim 1, further comprising allowing a first process to change said OCS of said object to a subset of said ACS of said first process, in response to detecting an owner of said first process is an owner of said object and said ACS is a superset of said OCS.
7. (Canceled).
8. (Canceled).
9. (Previously presented) The method of claim 1, wherein said CIB further includes a creator and a current owner for each object residing within said MCN.

10. (Previously presented) A Multi-Community Node (MCN) comprising:

a community information base (CIB), wherein said CIB includes:

a user community set (UCS) for each user of said MCN, wherein for a given user and associated UCS, a given community is a member of the UCS if the given user is a member of the given community;

an application community set (ACS) for each application on said MCN, wherein for a given application and associated ACS, a given community is a member of the ACS if the given application runs on behalf of a user in the given community; and

an object community set (OCS) for each object residing within said MCN, wherein each OCS is included in an ACS of a process which created it;

a processing unit configured to:

receive a request for access to an object;

consult said CIB responsive to said request;

permit access to said object in response to detecting:

said request is from a first user; and

a UCS of the first user is a superset of an object community set (OCS) of said object;

deny access to said object in response to detecting:

said request is from the first user; and

a UCS of the first user is not a superset of an OCS of said object;

permit access to said object in response to detecting:

said request is from a process; and

an ACS of said process is a superset of said OCS; and

deny access to said object in response to detecting:

said request is from said process; and

an ACS of said process is not a superset of an OCS of said object;

wherein a given OCS comprises a first set of communities, a given UCS is a superset of the given OCS if at least all of the first set of

communities are also included in the given UCS, and a given ACS is a superset of the given OCS if at least all of the first set of communities are also included in the given ACS.

11. (Original) The MCN of claim 10, wherein said object is an operating system controlled resource.
12. (Original) The MCN of claim 11, wherein said object is selected from the group consisting of a file system, a storage volume, a directory, a file, a record, a memory region, a queue, a pipe, a socket, a port, or an input/output device.
13. (Previously presented) The MCN of claim 10, wherein an initial owner of said object is a creator of said object.
14. (Original) The MCN of claim 10, wherein said processing unit is further configured to permit an owner of said object to designate a first user as a new owner of said object, in response to detecting a UCS of said first user is a superset of said OCS.
15. (Original) The MCN of claim 10, wherein said processing unit is further configured to allow a first process to change said OCS of said object to a subset of said ACS of said first process, in response to detecting an owner of said first process is an owner of said object and said ACS is a superset of said OCS.
16. (Canceled).
17. (Previously presented) The MCN of claim 10, wherein said CIB further includes a creator and a current owner for each object residing within said MCN.
18. (Previously presented) A computer system comprising:

a computer network; and

a multi-community node (MCN) coupled to said computer network, wherein said MCN comprises:

a community information base (CIB), wherein said CIB includes:

a user community set (UCS) for each user of said MCN, wherein for a given user and associated UCS, a given community is a member of the UCS if the given user is a member of the given community;

an application community set (ACS) for each application on said MCN, wherein for a given application and associated ACS, a given community is a member of the ACS if the given application runs on behalf of a user in the given community; and

an object community set (OCS) for each object residing within said MCN, wherein each OCS is included in an ACS of a process which created it;

a processing unit configured to:

receive a request for access to an object;

consult said CIB responsive to said request;

permit access to said object in response to detecting:

said request is from a first user; and

a UCS of the first user is a superset of an object community set (OCS) of said object;

deny access to said object in response to detecting:

said request is from the first user; and

a UCS of the first user is not a superset of an OCS of said object;

permit access to said object in response to detecting:

said request is from a process; and

an ACS of said process is a superset of said OCS; and

deny access to said object in response to detecting:

said request is from said process; and

an ACS of said process is not a superset of an OCS of said object;
wherein a given OCS comprises a first set of communities, a given UCS is
a superset of the given OCS if at least all of the first set of
communities are also included in the given UCS, and a given ACS
is a superset of the given OCS if at least all of the first set of
communities are also included in the given ACS.

19. (Original) The computer system of claim 18, wherein said object is an operating system controlled resource.
20. (Original) The computer system of claim 19, wherein said object is selected from the group consisting of a file system, a storage volume, a directory, a file, a record, a memory region, a queue, a pipe, a socket, a port, or an input/output device.
21. (Previously presented) The computer system of claim 18, wherein an initial owner of said object is a creator of said object.
22. (Original) The computer system of claim 18, wherein said processing unit is further configured to permit an owner of said object to designate a first user as a new owner of said object, in response to detecting a UCS of said first user is a superset of said OCS.
23. (Original) The computer system of claim 18, wherein said processing unit is further configured to allow a first process to change said OCS of said object to a subset of said ACS of said first process, in response to detecting an owner of said first process is an owner of said object and said ACS is a superset of said OCS.
24. (Canceled).
25. (Previously presented) The computer system of claim 18, wherein said CIB further includes a creator and a current owner for each object residing within said MCN.

26. (Previously presented) A carrier medium comprising program instructions, wherein said program instructions are executable to:

receive a request for access to an object;

consult a community information base (CIB) responsive to said request, wherein said CIB includes:

a user community set (UCS) for each user of said MCN, wherein for a given user and associated UCS, a given community is a member of the UCS if the given user is a member of the given community;
an application community set (ACS) for each application on said MCN, wherein for a given application and associated ACS, a given community is a member of the ACS if the given application runs on behalf of a user in the given community; and
an object community set (OCS) for each object residing within said MCN, wherein each OCS is included in an ACS of a process which created it;

permit access to said object in response to detecting:

said request is from a first user; and

a UCS of the first user is a superset of an OCS of said object; and

deny access to said object in response to detecting:

said request is from the first user; and

a UCS of the first user is not a superset of an OCS of said object;

permit access to said object in response to detecting:

said request is from a process; and

an ACS of said process is a superset of an OCS of said object; and

deny access to said object in response to detecting:

said request is from said process; and

an ACS of said process is not a superset of an OCS of said object;

wherein a given OCS comprises a first set of communities, a given UCS is a superset of the given OCS if at least all of the first set of communities are also included in the given UCS, and a given ACS is a superset of the given OCS if at least all of the first set of communities are also included in the given ACS.

27. (Original) The carrier medium of claim 26, wherein said object is an operating system controlled resource.
28. (Original) The carrier medium of claim 27, wherein said object is selected from the group consisting of a file system, a storage volume, a directory, a file, a record, a memory region, a queue, a pipe, a socket, a port, or an input/output device.
29. (Previously presented) The carrier medium of claim 26, wherein an initial owner of said object is a creator of said object.
30. (Original) The carrier medium of claim 26, wherein said program instructions are further executable to permit an owner of said object to designate a first user as a new owner of said object, in response to detecting a UCS of said first user is a superset of said OCS.
31. (Original) The carrier medium of claim 26, wherein said program instructions are further executable to allow a first process to change said OCS of said object to a subset of said ACS of said first process, in response to detecting an owner of said first process is an owner of said object and said ACS is a superset of said OCS.
32. (Canceled).
33. (Canceled).
34. (Previously presented) The carrier medium of claim 26, wherein said CIB further

includes a creator and a current owner for each object residing within said MCN.